REMARKS

Claims 1-60 are pending.

Claims 1, 4, 14, 16, and 24 have been amended to specify the administration of a buprenorphine transdermal dosage form as a monotherapy treatment. Support for this amendment can be found in the specification at, for example, page 3, lines 20-21; and page 5, lines 13-31.

New claims 29-60 have been added. Support for new claims 29-44 can be found in the specification at page 6, line 28 to page 7, line 1 and page 17, lines 22-30. Support for new claims 45-60 can be found in the specification at page 7, lines 1-2 and page 17, lines 22-30.

Provisional Obviousness-Type Double Patenting Rejection

Claims 1-28 have been provisionally rejected for obviousness-type double patenting over claims 1-45 in co-pending U.S. Application No. 10/736,043. The Examiner states that although the conflicting claims are not identical, they are also not patentably distinct. In response, Applicant requests that the rejection be held in abeyance because a patent containing the conflicting claims has not yet issued.

Obviousness Rejection

Claims 1-28 have been rejected under 35 U.S.C. §103 as obvious over U.S. Patent No. 5,240,711 to Hille et al. ("Hille") in view of U.S. Patent Application Publication No. 2002/0137761 to Crain et al. ("Crain"). The Examiner contends that Hille discloses the administration of transdermal buprenorphine for the treatment of pain, and Crain discloses the use of buprenorphine to treat chronic pain from sickle cell disease. According to the Examiner, it would have been obvious to administer buprenorphine transdermally for the treatment of pain, wherein the pain results from sickle cell disease.

Claims 1, 4, 14, 16, and 24 have been amended to specify the administration of a buprenorphine transdermal dosage form as a monotherapy treatment. These claims (and dependent claims 2, 3, 5-13, 15, 17-23, and 25-28) are not obvious over Hille in view of Crain because the combined teachings of these references would not have lead one of ordinary skill in the art to reasonably expect transdermal administration of buprenorphine alone to effectively treat the unique pain conditions experienced by patients suffering from painful episodes due to sickle cell disease.

A painful episode resulting from sickle cell disease is a specific type of pain that is different from chronic pain, stems from vaso-occlusion caused by sickle cell disease, and manifests in "painful episodes" that are typically severe, often occurring at one or more locations, and may persist for several days or even weeks. *See* Specification, p. 1, line 30 to p. 2, line 2; and p. 2, lines 7-16. Hille does not disclose or suggest any treatment aimed at this particular type of pain. In fact, Hille mentions "pain" only generally, without any further details other than a single mention of pain associated with cancer or a final stage tumor. *See* Hille, col. 1, lines 19-21. Hence, one of ordinary skill in the art would not have reasonably expected Hille's generic pain treatment to effectively treat a "painful episode" due to sickle cell disease, particularly because the latter involves unique conditions not found in other types of pain.

Crain discloses a method of treating broad classes of pain, including both acute and chronic pain, as well as somatogenic and psychogenic pain. *See* Crain, ¶ 66. However, Crain does not disclose or suggest the treatment of "painful episodes" due to sickle cell disease. Moreover, Crain's treatment method is expressly limited to the administration of a *combination* of a bimodally-acting opioid agonist and an agent that inhibits GM1-ganglioside in nociceptive neurons. *See* Crain, ¶¶ 31, and 33. The Crain method is predicated on the discovery that GM1-ganglioside inhibitors

increase the analgesic potency of opioid agonists. *See* Crain, ¶ 9. Crain does not disclose or suggest that administration of an opioid agonist alone would effectively treat these broad classes of pain, let alone painful episodes due to sickle cell disease. Rather, Crain specifically teaches that the combination of an opioid and an agent that inhibits GM1-ganglioside is required to achieve an analgesic effect sufficient to treat the disclosed pain syndromes. Additionally, Crain identifies buprenorphine in a list of more than 18 different "bimodally-acting opioid agonists" (*see* Crain, ¶ 31), yet discloses nothing that would have motivated one of ordinary skill in the art to specifically select this opioid and administer it in the absence of a GM1-ganglioside inhibitor to treat painful episodes due to sickle cell disease. In view of the foregoing, claims 1-28 are not obvious over Hille in view of Crain.

New claims 29-60 are non-obvious because no combination of the references discloses or suggests administering the combination of (1) a buprenorphine transdermal system (BTDS) and a mu agoinst opioid or a mixed agonist/antagonist opioid (claims 29-44), or (2) a BTDS and a non-steroidal anti-inflammatory drug (NSAID) (claims 45-60) to treat a painful episode due to sickle cell disease in a patient.

For the reasons stated above, Applicant respectfully requests that this rejection be withdrawn.

Conclusion

In view of these amendments and remarks, it is respectfully requested that the application be reconsidered and that all pending claims be allowed and the case passed to issue.

If there are any other issues remaining, which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

Dated: May 24, 2007

Respectfully submitted,

By _____

Paul, M. Zagar, M.D.
Registration No.: 52,392
DARBY & DARBY P.C.
P.O. Box 5257
New York, New York 10150-5257
(212) 527-7700
(212) 527-7701 (Fax)
Attorneys/Agents For Applicant